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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,311	11/08/2001	Masajirou Inoue	106145-00029	5180

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EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/986,311

Applicant(s)

INOUE ET AL.

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Remarks***

This Office action is responsive to applicant's amendment filed November 16, 2005.

Claims 1-4, 6 and 7 are pending.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a deformation of "approximately 45 to 60%", does not reasonably provide enablement for a deformation of "60% or less" as presently recited in the claims, or "not more than 60%" as presently submitted in applicant's remarks. See page 7 of applicant's remarks, also refer to page 42 of the specification and Figures 4-5. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

### ***Claim Rejections - 35 USC § 102***

The rejection of claim 10 under 35 U.S.C. 102(e) based on Matsukawa et al. (U.S. Pat. 6,153,326) is deemed moot in view of the cancellation of this claim.

***Claim Rejections - 35 USC § 103***

The rejection of claim 7 under 35 U.S.C. 103(a) based on Steck et al. (U.S. Pat. 5,464,700) and Matsukawa et al. (U.S. Pat. 6,153,326) has been obviated.

The rejection of claim 8 under 35 U.S.C. 103(a) based on Steck et al. (U.S. Pat. 5,464,700) and Matsukawa et al. (U.S. Pat. 6,153,326) is deemed moot in view of the cancellation of this claim.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as obvious over Steck et al. (U.S. Pat. 5,464,700) in view of Matsukawa et al. (U.S. Pat. 6,153,326).

The rejection is maintained for the reasons of record. Applicant's arguments have been fully considered, however they are not found persuasive for the following reasons.

Applicant submits that independent claim 1, drawn to a polymer electrolyte fuel cell, recites "the structural feature of the seal... to retain the gap formed between the corresponding separator and membrane electrode assembly upon sealing." (Remarks on page 7) The difference from the prior art that is then asserted is that Steck fails to teach or at least suggest the structural feature of the gap between the elements being retained upon sealing. However, this argument is not persuasive. Applicant's assertions are premised on the gap being a requisite part of the claimed fuel cell. At present, claim 1 merely recite that the "seal is formed by applying the

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liquid thermosetting sealing agent into a gap..." (lines 5-6) Though the claim further that upon curing the gap is retained upon sealing (lines 16-18), the gap is not recited as being a requisite feature of the claimed fuel cell and instead is recited as part of a product-by-process limitation. For the reasons set forth in the prior Office action, a product-by-process feature is not given patentable weight insofar as the limitation does not give breadth or scope to the product claim. The examiner maintains that claimed product, at least upon completed assembly, appears to be the same or similar to the prior art product insofar as having a seal in a fuel cell between the separator and the membrane electrode assembly.

Arguments drawn to differences between thermoplastic and thermosetting resins are noted. Such arguments drawn to, e.g. the instant thermosetting sealing agent being cured over a period of 1 to 5 hours, are deemed to have merit for process claim 7 only (prior rejection directed thereto now withdrawn). As to the combination of Steck et al. and Matsukawa et al. involving the different resins, the examiner maintains that the skilled artisan would find obvious to employ the liquid thermosetting sealing agent of Matsukawa et al. in Steck et al.'s invention, motivation for the combination coming directly from Matsukawa et al., "[the] composite of the present invention may be used... preferably as a separator of a fuel cell (a solid polymer type fuel cell)". See Matsukawa et al. in col. 3 lines 1-4.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

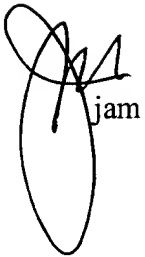
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature, possibly reading 'jam', is written over a large, hand-drawn oval. The signature is in black ink and appears to be a stylized representation of the word 'jam'.